

Geographic Analysis and Monitoring Program

Post Fire Mapping and Analysis Project

Statement of Problem

The most important need after a major wildfire is mapping of burn severity. Almost all subsequent land management prescriptions and scientific analysis are based on mapped burn products. Mapping burn severity using Landsat data provides consistent and accurate burn severity assessment, fire perimeter, and tabulation of areas burned by severity levels and land/vegetation types.

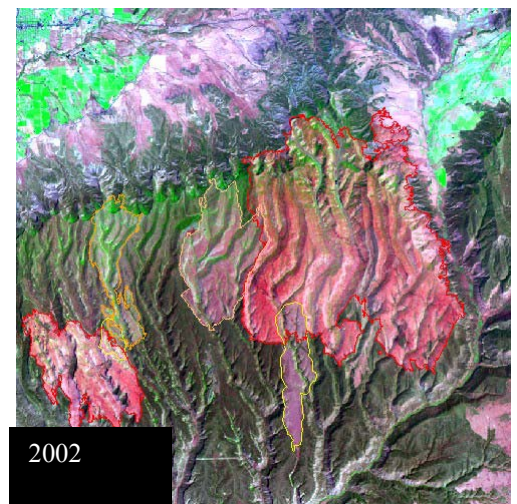
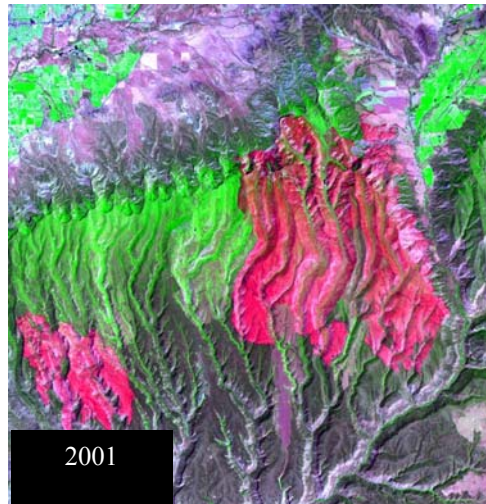
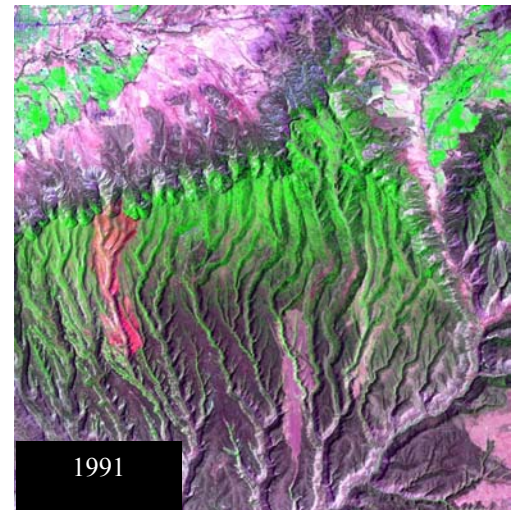
Burn severity is an overall index of fire effects and ecosystem response. Mapping burn severity is the first step to produce spatially distributed data for use in almost all subsequent management decisions. Funded by the National Park Service, this task is to produce standardized burn products at 30-meter resolution (Landsat pre- and post-fire imagery, estimated burn severity map, fire perimeter, and land cover classes affected by the fire). In addition to NPS applications, the data produced by EDC will also be used by USGS to analyze impact and response of fire-ecosystem relationship -- a key element in the GAM S&T Report.

Objectives

Tasks under Post Fire Mapping and Analysis project are designed to 1) provide timely products of burn severity to federal land management agencies, and 2) conduct research in areas of burn mapping validation, analysis of fire effects, and linkage of areas burned to land cover and land use change.

Relevance and Impact

USGS produced burn map products will be used by land managers to prescribe management actions following major fires. The products will also be useful for monitoring ecosystem response to fire in subsequent years. Analysis of burn mapping will allow quantitative assessment of fire effects.



Strategy and Approach

Conduct research to 1) validate burn mapping algorithms so that burn mapping production will produce standardized and consistent products, 2) link burn severity to land cover and land use change, and 3) contribute burn severity mapping to carbon studies. Cultivate our current relationship with NPS by responding to their needs promptly and deliver map products. Further, we should work on extending the post-fire work to 1) include more federal agencies (e.g. Bureau of Land Management), and 2) include monitoring capabilities over longer term and in large areas.

For More Information

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